

WHAT IS CLAIMED IS:

- 5 1. A molded article comprising:
- (a) a rigid support having a surface and a plurality of perforations having edges; and
- (b) a molded flexible member of thermoplastic material, at least a portion of said flexible member being in abutting relationship with at least a portion of the surface of said support, said flexible member having a hollow interior,
- 10 wherein a portion of said flexible member extends through at least some of the perforations of said rigid support, the edges of said perforations being embedded in the portions of the flexible member extending therethrough, thereby fixedly attaching said flexible member to said rigid support.
- 15 2. The article of Claim 1 wherein said rigid support is fabricated from a material selected from metal, thermoset plastic material, thermoplastic material and combinations thereof.
- 20 3. The article of Claim 2 wherein said rigid support is fabricated from thermoplastic material optionally reinforced with a material selected from glass fibers, carbon fibers, metal fibers, polyamide fibers and mixtures thereof.
- 25 4. The article of Claim 1 wherein the thermoplastic material of said flexible member is selected from at least one of thermoplastic vulcanizates, thermoplastic polyolefins, thermoplastic polyurethanes, thermoplastic polyureas, thermoplastic polyamides, thermoplastic polyesters and thermoplastic polycarbonates.
5. The article of Claim 1 wherein said flexible member has an outer surface, said flexible member further comprising a fabric covering on at least a portion its outer surface.
6. The article of Claim 1 wherein said flexible member has an outer surface, at least a portion of said outer surface having molded-in texture.

7. The article of Claim 1 wherein said flexible member has an outer surface, said flexible member further comprising an integral film on at least a portion of said outer surface, said integral film being formed on said outer surface by means of an in-mold decoration process.

5 8. The article of Claim 1 wherein said flexible member is further fixedly attached to said rigid support by attachment means selected from fasteners, adhesives and combinations thereof.

9. The article of Claim 1 wherein the interior of said flexible member is filled with a material selected from, pressurized gas, liquid, gel, polymeric foam and combinations thereof.

10 10. The article of Claim 1 wherein said flexible member comprises means for reversibly increasing pressure within the hollow interior of said flexible member.

11. The article of Claim 10 wherein said means for reversibly increasing pressure within the hollow interior of said flexible member comprises at least one pressure regulating valve that provides fluid communication with the hollow interior of said flexible member, and one of (i) a heated liquid and (ii) a cooled liquid are reversibly introduced into the hollow interior of said flexible member through said at least one pressure regulating valve.

12. The article of Claim 1 wherein said article is a seat.

13. The article of Claim 12 wherein said rigid support comprises a rigid seat back support and a rigid seat bottom support, and said flexible member comprises flexible cushions fixedly attached to each of said rigid seat back support and rigid seat bottom support.

14. The article of Claim 12 wherein said rigid support is a continuous unitary unit.

15. The article of Claim 1 wherein at least some of said perforations have deformed edge portions, and said deformed edge portions are embedded in the flexible member material extending therethrough.

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16. The article of Claim 1 wherein said rigid support (a) is a rigid hollow support having an exterior surface and a hollow interior, said flexible member (b) being in abutting relationship with at least a portion of the exterior surface of said hollow support, at least a portion of said flexible member (b) extends through at least some of said perforations into the hollow interior of said rigid hollow support.

17. The molded article of Claim 1 wherein said rigid support (a) has a plurality of anchoring extensions extending into said flexible member (b), each of said anchoring extensions having walls, an interior chamber and at least one wall perforation in said walls, each wall perforation having edges, a portion of said flexible member (b) extends through at least some of said wall perforations into said chamber, the edges of said wall perforations being embedded in the plastic material extending therethrough, thereby fixedly attaching said flexible member (b) to said rigid support (a).

18. The molded article of Claim 1 wherein said rigid support (a) has edges, and said flexible member (b) is further fixedly attached to said rigid support (a) by means of portions of said flexible member (b) wrapping around and embedding at least a portion of the edges of said rigid support (a).

19. A molded article comprising:

- (a) a rigid support having a first surface and a second surface, said rigid support having a plurality of perforations having edges; and
- (b) a flexible member of thermoplastic material, at least a portion of said flexible member being in abutting relationship with at least a portion of the first surface of said rigid support, said flexible member having a hollow interior,

wherein said article is prepared by a process comprising blow molding a thermoplastic parison precursor of said flexible member onto the first surface of said rigid support, a portion of the thermoplastic material of said thermoplastic parison extends through at least some of said perforations of said rigid support, the edges of said perforations being embedded in the

plastic material extending therethrough, thereby attaching fixedly said flexible member to said rigid support.

20. The article of Claim 19 wherein said rigid support is fabricated from a material selected from metal, thermoset plastic material, thermoplastic material and combinations thereof.

21. The article of Claim 19 wherein said rigid support is fabricated from thermoplastic material optionally reinforced with a material selected from glass fibers, carbon fibers, metal fibers, polyamide fibers and mixtures thereof.

22. The article of Claim 19 wherein the thermoplastic material of said flexible member is selected from at least one of thermoplastic vulcanizates, thermoplastic polyolefins, thermoplastic polyurethanes, thermoplastic polyureas, thermoplastic polyamides, thermoplastic polyesters and thermoplastic polycarbonates.

23. The article of Claim 19 wherein said flexible member has an outer surface, said flexible member further comprising a fabric covering on at least a portion of its outer surface.

24. The article of Claim 19 wherein said flexible member has an outer surface, at least a portion of said outer surface of said flexible member having molded-in texture.

25. The article of Claim 19 wherein said flexible member has an outer surface, said flexible member further comprising an integral film on at least a portion of said outer surface, said integral film being formed on said outer surface by means of an in-mold decoration process.

26. The article of Claim 19 wherein said flexible member is further fixedly attached to said rigid support by attachment means selected from fasteners, adhesives and combinations thereof.

27. The article of Claim 19 wherein the hollow interior of said flexible member is filled with a material selected from, pressurized gas, liquid, gel, polymeric foam and combinations thereof.

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28. The article of Claim 19 wherein said flexible member comprises means for reversibly increasing pressure within the hollow interior of said flexible member.

29. The article of Claim 19 wherein said article is a seat.

5 30. The article of Claim 29 wherein said rigid support comprises a rigid seat back support and a rigid seat bottom support, and said flexible member comprises flexible cushions fixedly attached to each of said rigid seat back support and rigid seat bottom support.

10 31. The article of Claim 29 wherein said rigid support is a continuous unitary unit.

15 32. The molded article of Claim 19 wherein during the blow molding step, at least one of (i) increased gaseous pressure is provided on the interior of said thermoplastic parison, and (ii) reduced gaseous pressure is provided on the second surface of said rigid support, thereby forcing portions of said flexible member through at least some of said perforations.

20 33. The molded article of Claim 19 wherein said rigid support (a) is a rigid hollow support, said first surface defining the exterior of said hollow support, said second surface defining a hollow interior of said hollow support, at least a portion of said flexible member (b) extends through at least some of said perforations into the hollow interior of said rigid hollow support.

25 34. The molded article of Claim 19 wherein said rigid support (a) has a plurality of anchoring extensions extending into said flexible member (b), each of said anchoring extensions having walls, an interior chamber and at least one wall perforation in said walls, each wall perforation having edges, a portion of said flexible member (b) extends through at least some of said wall perforations into said chamber, the edges of said wall perforations being embedded in the plastic material extending therethrough, thereby fixedly attaching said flexible member (b) to said rigid support (a).

35. A method of preparing a molded article comprising a molded flexible hollow thermoplastic member fixedly attached to a rigid support, said method comprising:

5 (a) placing said rigid support in a mold, said rigid support having a plurality of perforations having edges, a first surface and a second surface; and

(b) blow molding a thermoplastic parison precursor of said flexible member against the first surface of said rigid support; wherein a portion of the thermoplastic material of said thermoplastic parison extends through at least some of said perforations of said rigid support, the edges of said perforations being embedded in the plastic material extending therethrough, thereby attaching fixedly said flexible member to said rigid support.

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36. The method of Claim 35 wherein during blow molding step (b), at least one of (i) increased gaseous pressure is provided on the interior of said thermoplastic parison, and (ii) reduced gaseous pressure is provided on the second surface of said rigid support, thereby forcing portions of said flexible member through at least some of said perforations.

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